

3/PR75

10/552637  
JC09 Rec'd PCT/PTO 07 OCT 2009

WO 2004/090509

PCT/BG2004/000007

1

**METHOD AND DEVICE FOR EVALUATION OF BIO-PSYCHO-PHYSICAL  
INFLUENCE OF RADIO, TELEVISION AND MEDIA PRODUCTS UPON  
HUMANS**

**FIELD OF THE INVENTION**

The invention relates to the Method and equipment for estimation the biopsychophysical influence of radio, TV and media products on the man in stanteneonsiy and long term health

**BACKGROUND OF THE INVENTION**

Statistical methods for investigation and application the positive action of music and pictures on the human health (therapy by music and pictures) are well known but, they don't possess equipment with reverse bond for measurement the exact grade of influence based on some physical measurable parameters

**DISCLOSURE OF THE INVENTION**

The aim of the invention is to create a method and equipment for estimation the biopsychophysical influence of radio, TV and media products on the man, which can show the grade of their action on the human instantaneously and long term health.

The problem is solved by a method and two equipment for estimation the biopsychophysical influence of radio, TV and media products on the man. The method for estimation the bio-psychophysical influence of radio, TV and media products is characterized itself, that the person under the influence of radio, TV and media products holds in his hands a bottle with water and a measurements of the latter are carried out by two system, the dates from which together with the dates from equipment measuring the biophysical parameters of the person are processed by a computer compatible with the dates from previous measurements of that person. The first system for estimation the influence of radio, TV and media products on the man is characterized it self, that a drop from the water influenced by media product via the person under investigation is bid in a hermetic box with air pump on a transparent lamella which consist of a thin mailer folio and a glass plate, illuminated through a glass window with a plane parallel beam, forming on

the bottom surface of the plate dark, ring, which is registered by the help of a mirror and a digital TV camera and by a computer the width of the dark ring and the energy distribution spectrum is calculated. The second for estimation the influence of radio, TV and media products on the man is characterized it self, that a water drop is laid in a box with air pump on a pad placed under the influence of radio, TV and media product through a hole in the box and with a reader, directed by a manipulator the surface tension and the fluctuations of the surface potential are measured and recorded in a computer.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

Figure 1 shows a block scheme of the method for estimation the biopsychophysical influence of radio, TV and media products on the man

1. Influencing product (video, sound, pictures and others)
2. Man
3. Bottle with water holder in man's hands
4. Equipment, measuring the surface tension and fluctuations of the surface potential the water drop
5. Equipment, measuring the water intramolecular energy spectrum
6. Equipment, measuring the biophysical parameters of the man: 02 in the blood pressure, EKG and arithmy, EEG and others
7. Computer processing of the dates
8. Basic dates of previous measurements of the person

Figure 2 shows equipment for estimation the influence of radio, TV and media products of the man

1. Source of a plane parallel beam
2. Glass window
3. Hermetic box
4. Water drop
5. Folio of mylar
6. Glass plate
7. Digital TV camera
8. Computer

9. Air pump
10. Mirror

Figure 3 shows equipment for estimation the influence of radio, TV and media products on the man's

Hole in the box for a influence of radio, TV and other products

1. Manipulator
2. Reader
3. Work camera
4. Water drop
5. Pad
6. Air pump
7. Computer

### DESCRIPTION OF THE PREFFERED EMBODIMENTS

The equipment for estimation on the biopsychophysical influence of radio, TV and media products on the man, measuring the water intramolecular energy spectrum is realized by the following method:

The water intramolecular energy spectrum is determined by a measurement the wetting angles changes of water drops from treated and nontreated (control water), evaporating simultaneously at constant condition – temperature, relative humidity and air capacity. The energy of the H-bongs between two water molecules E is nounded with the wetting angle by the relation:

$$E = - \frac{1 + \cos \theta}{14,33}$$

The water intramolecular energy spectrum is defined by the expression:

$$f(E) = \frac{14,33 f(\theta)}{\sqrt{1-(1+14,33E)^2}} ;$$

where  $f(\theta)$  is the distribution function on wetting angles. It can received the latten by measurements at equal intervals of time the wetting angles  $\theta$  until the fully evaporation of the water drops, which is realized at  $\theta = 0$

The wetting angle can be determined by the following way: the water drops are laid on a hydrophobic transparent pad, which consist of a thin mylar folio and a glass plate. After illumination the drop with plane parallel beam and refraction of the light in its ends a dark ring has been received on the bottom surface of the plate. Its widths is connected with the wetting angle of the drop in the following manner:

$$\theta = \arctg \frac{n_1}{[n_2^2(1 + \frac{d^2}{a^2}) - n_1^2]^{1/2} - [1 + \frac{d^2}{a^2}]^{1/2}}$$

where  $n_1$  and  $n_2$  are the refractive indexes of glass and water,  $d$  is the thickness of the glass plate.

The drops of treated and non-treated (control water) are closed in a hermetic box with constant temperature, relative humidity and capacity of the air through the box. With a purpose to eliminate the influence of other factors except of investigated the probe and control drops are evaporated simultaneously and the differential energetic spectrum is determined.

$$\Delta f(E) = f(\text{probe}) - f(\text{control})$$

The equipment for estimation the biopsychophysical influence of radio, TV and media products on the man, measuring the surface tension and fluctuations of the surface potential of the water drop is realized in a working box with air flux with constant temperature, relative humidity and flux capacity in which a water drop is placed on a pad. The measurement of the surface tension and fluctuations of the surface potential is performed by the help of a nano-brush, which represents five needle's silicon micro-brush, directed with a manipulator by such way that the brush moves parallel to water drops surface. The results of measurement are processed by a computer.